explOra

SYSTEM ON MODULE

Processor	i.MX6Dual/i.MX6Quad
Core	Dual or Quad ARM Cortex™ A9 1GHz
RAM	1, 2 or 4GB of DDR3 @528MHz
Storage	4GB eMMC or MicroSD socket on module
Power	Only 3.3 Volts

Avatar MX6

PRODUCT SUMMARY

The Avatar MX6 is a member of Explora's System on Module Series (i.MX25, i.MX51, and other processors).

The Avatar modules are complete computers, implemented on a small board and ready to be designed into your embedded system.

Avatar MX6 module includes a Freescale™ i.MX6 processor, USB PHY, DDR3 and eMMC or microSD socket. The integrated LCD controller allows direct connection to an LCD.

The Avatar MX6 is specifically targeted for embedded applications where size, performance, rugged solutions and cost are critical factors.

SPECIFICATIONS

- 3.3V supply @ 1Amp MAX / 3.3V or 1.8V I/Os, configurable on engine board
- i.MX 6Dual/6Quad processor enables the following interfaces to external devices (some of them are muxed and not available simultaneously):
  - Hard Disk Drives—SATA II, 3.0 Gbps
  - One Parallel 24-bit display port, up to 225 Mpixels/sec
  - LVDS display ports / HDMI 1.4 port
  - MIPI/DSI, two lanes at 1 Gbps
  - 2 MIPI CSI serial camera ports / Parallel Camera port
  - 3 MMC/SD/SDIO card ports
  - One High Speed (HS) USB 2.0 OTG (Up to 480 Mbps), with integrated HSUSB PHY
  - One USB 2.0 (480 Mbps) host with integrated High Speed PHY
  - SSI block TLV320 / ESAI / Sony Philips Digital Interconnect Format (SPDIF), Rx and Tx
  - Three I2C, supporting 400 kbps / Five eCSPI (Enhanced CSPI) / Five UARTs, up to 4.0 Mbps
  - Gigabit Ethernet Controller (IEEE1588 compliant), 10/100/1000 Mbps
  - Four Pulse Width Modulators (PWM) / GPIO with interrupt capabilities
  - 5x5 Key Pad Port (KPP)
  - Two Controller Area Network (FlexCAN), 1 Mbps each
  - Two Watchdog timers (WDOG) / Audio MUX (AUDMUX) / MLBus

KEY FEATURES

- Flexible processing power and hardware acceleration options
- On board boot and storage device, either eMMC or MicroSD
- Flexible i.MX6 BOOT options are preserved on the module
- Most i.MX6 pin muxing options are preserved on the module
- On board serial EEPROM for module specific information and personalised system configuration
- Designed for low EMI and for power efficiency
- Rugged module fixation with 4 posts
- Reliable connection to baseboard through MXM 3.0 connector

OS SUPPORT & DRIVERS

- Android & Linux
- OS Custom driver development
- OS technical support

freescale™ semiconductor

Explora Technologies
www.explora-tech.com

2716 Einstein, suite 10 Québec, QC, G1P 4S8 Canada
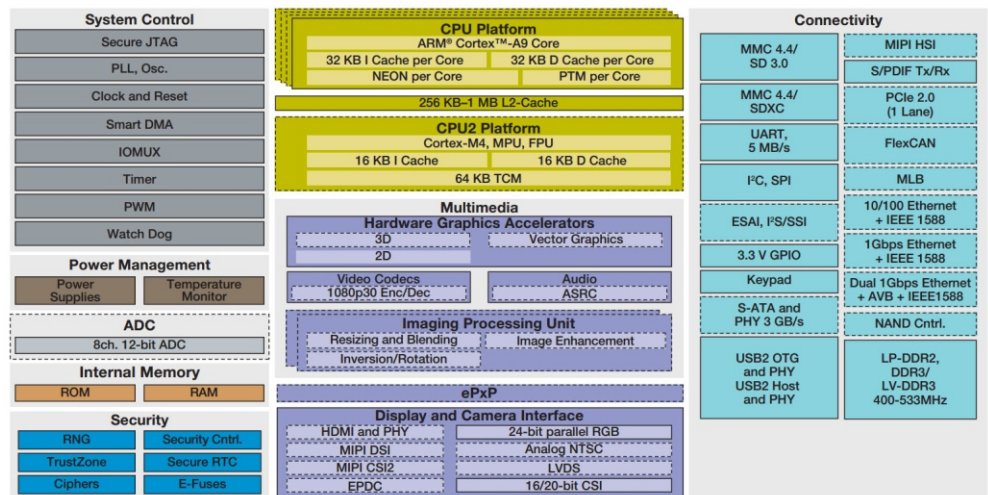Tel: 418 658 5556 Fax: 418-263 5160

explOra

Avatar MX6

PROCESSOR

Freescale™'s i.MX6 applications processors balance the performance, power consumption, connectivity and multimedia capabilities necessary to drive today's latest and greatest products. It features Freescale's advanced and power-efficient implementation of the ARM Cortex™-A9 core, which operates at speeds up to 1 Ghz.

Benefits include high performance processing and multimedia capabilities, hardware acceleration that enables very low power consumption for video and graphics, and a high level of integration.

STANDARD AVATAR SYSTEM ON MODULE SERIES PINOUT

SPECIAL PERIPHERALS FOR THE AVATAR MX6

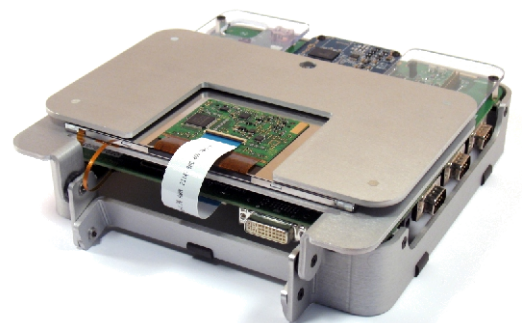Additional interface GPIO are available on Avatar MX6 specific pins.

ARM POWERED®

explora

Avatar MX6

AVATAR SYSTEM ON MODULE ORDERING CODES

Z	CZ	Q	1000	1	1	1	1

Model 1

Operating Temperature
I = -20 to 70C
E = -40 to 85C

System Configuration
1 = microSD base system (Hinge socket)
4 = eMMC base system 4 GBytes

RAM
1 = 1 GBytes
2 = 2 Gbytes
4 = 4 GBytes

Processor Speed
1000 = 1000 Mhz

Processor
Q = i.MX6 Quad
D = i.MX6 Dual

CZ

Z

AVATAR DEVELOPMENT KIT
ZCZ060-01

INFORMATION

email: sales@explora-tech.com
Tel : 418 658 5556
Fax : 418 263 5160

CZ060-G001-A1